

**DETAILED ACTION**

***Allowable Subject Matter***

Claims 1-8, 10 and 11 are allowed.

The following is an examiner's statement of reasons for allowance: Claims 1, 7 and 10 are allowable over the references of record because none of these references discloses or can be combined to yield the claimed invention which includes a tunnel barrier layer of antiferromagnetic material formed between the magnetization pinned layer of ferromagnetic material and the emitter of between the collector and the magnetization pinned layer of ferromagnetic material and provided with an exchange coupling with an adjoining one of the magnetization pinned layer of ferromagnetic material, the tunnel barrier layer being dielectric and tunnel conductive and the magnetization of the magnetization pinned layer of ferromagnetic material being fixed by the exchange coupling between the magnetization pinned layer of ferromagnetic material and the tunnel barrier of anti ferromagnetic material.

Claims 2-6, 8, and 11 contain allowable subject matter by virtue of their dependency.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tsz K. Chiu whose telephone number is 571-272-8656. The examiner can normally be reached on 0800 to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra V. Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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